U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Former Kaiser Smelter - Removal Polrep
Initial Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region X

Subject: **POLREP #1**
Initial - Mobilization & Site Preparation
Former Kaiser Smelter
10RK00
Mead, WA
Latitude: 47.7525257 Longitude: -117.3777283

To: David Rees, EPA Region 10
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From: Brooks Stanfield, On Scene Coordinator
Date: 8/1/2020
Reporting Period: July 27 - August 1, 2020

1. Introduction

1.1 Background

Site Number:	10RK00	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	6/1/2020
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	7/27/2020	**Start Date:**	7/27/2020
Demob Date:	12/31/2020	**Completion Date:**	12/31/2020
CERCLIS ID:	WAN001020091	**RCRIS ID:**	
ERNS No.:		**State Notification:**	WA (Washington)
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

CERCLA Time-Critical Removal Action

1.1.2 Site Description

The Site includes three separate tax parcels owned by two distinct owners. One parcel covers approximately 170 acres and includes a former aluminum smelter facility. The "facility parcel" is owned by Spokane Recycling, LLC and is zoned for heavy industrial use. This parcel contains dozens of large industrial buildings, administrative buildings, a network of stormwater catch basins, sumps, storage tanks, a rail spur, and other features common to industrial facilities.

The former facility's system of catch basins and storm sewers collects and diverts stormwater through a half-mile long aqueduct flowing north from the facility to a pair of settling ponds, referred to as the upper pond and lower pond. The ponds are located on a second 405-acre undeveloped parcel owned by Kaiser Aluminum Investments Company (KAIC). At the northern end of the lower pond, a pipe transfers the water into a second aqueduct that runs approximately 1.25 miles to a third parcel, owned by Spokane Recycling, LLC, where an effluent outfall discharges stormwater into Deadman Creek.

The smelter facility was constructed by the Defense Plant Corporation, which began plant operations in 1942 during World War II. The property was purchased in 1946 by Kaiser Aluminum & Chemical Company (KACC). KACC operated the facility from 1946 until 2000,when the company ceased smelting operations. A portion of the former smelter property was placed on the National Priorities List (NPL) in 1983. The NPL Site, known as the Kaiser Aluminum – Mead Works Potliner Superfund Cleanup Site, is owned by a trust, which is responsible for carrying out a long-term remedy that is being overseen by the Washington Department of Ecology (Ecology). The 50-acre NPL Site consists of spent potliner solid waste, a 25-acre wet scrubber sludge bed, and a plume of groundwater contaminated with cyanide and fluoride, which flows in a northwest direction and away from the Site features being addressed in this removal action.

The facility parcel and the outfall parcel (located to the north by Deadman Creek) have been sold together to three separate owners since 2004 following close of KACC's operations. The current owner, Spokane Recycling, LLC, acquired the facility and outfall parcels in 2014. The undeveloped 405-acre parcel with the settling ponds was originally acquired by KACC from the United States of America in 1976 while the company still owned and operated the smelter. The parcel was not sold with the facility parcel and outfall parcel but rather transferred to Kaiser Aluminum Fabricated Products in 2006 and then later transferred to KAIC in 2010. As part of the sale of the plant and outfall parcels in 2004, KACC granted an easement to the purchaser to provide ongoing access to the stormwater aqueducts and settling ponds located on the 405-acre undeveloped parcel.

The vicinity of the Site is comprised of a mix of residential, educational, commercial, and industrial development. The closest surface water body is Deadman Creek, which is located approximately 1.5 miles

north of the site's industrial buildings. Deadman Creek is a tributary of the Little Spokane River, which subsequently flows into the Spokane River.

1.1.2.1 Location

The Site is located at 2111 East Hawthorne Road, Mead, Spokane County, Washington, approximately 8 miles north of downtown Spokane, Washington. The precise location is 47.753089 north latitude, 117.378199 west longitude.

1.1.2.2 Description of Threat

Primary COCs at the Site include several human carcinogens, namely polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and friable asbestos. These substances – in addition to other secondary contaminants of concern (COCs) – are emanating from deteriorating building materials and waste piles that are exposed to the elements and being spread throughout the Site by way of wind and rain creating immediate exposure risks to any visitors that may come in contact with these substances. Primary and other secondary COCs were also found in extremely elevated concentrations migrating through stormwater into a tributary of the Little Spokane River, a waterbody that has been included on the State's listing of impaired waters under Section 303(d) of the Clean Water Act due to the presence of PCBs in fish tissue. The presence of petroleum hydrocarbons in soils and sediments along the stormwater migration path creates an added risk, due to the ability of these constituents to increase the solubility, and thus the mobility of PCBs originating from the Site.

The lack of consistent site security enables frequent trespassing by homeless populations, who have used the property to locate encampments, and by curious locals who frequently document and publicize their illegal visits on social media, thus potentially attracting more unauthorized visitors. At the time of the Removal Site Evaluation, the local fire marshal expressed concern that this trespassing activity, in combination with a lack of available water service on the 170-acre property, creates an added risk of fire. Just prior to the initiation of removal activities, several fire hydrants on site became functional.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

The RSE sampling effort, conducted in May 2019, focused on the potential migration pathway of hazardous substances from the facility buildings through the catch basins and settling ponds to the outfall at Deadman Creek. Several PCB congeners were detected in various sampling locations during this effort. The PCB Aroclor 1268 was detected in samples collected from each of these sampling areas, which helped trace the connection between the source, sample locations along the pathway, and the outfall at Deadman Creek.

EPA observed at least 13 facility buildings that appeared to have walls constructed with Robertson Siding (often referred to by another trade name: Galbestos), which is a formerly used building material containing PCBs and asbestos. The Robertson Siding panels were noted to be weathered and damaged, with multiple pieces observed to be on the ground around the buildings. Chrysotile asbestos was detected in most of the Robertson Siding samples at concentrations of approximately 20%. Additionally, the analytical results confirmed the presence of high concentrations of Aroclor 1268 in siding material ranging from 70,000 to 39,000,000 micrograms per kilogram (µg/kg). The regulatory limit for PCB concentrations in any substance under the Toxic Substances Control Act (TSCA) is 50,000 µg/kg as a baseline concentration to protect human health.

Aroclor 1268 was detected in soils and solids on the ground near exterior walls with Robertson Siding at concentrations as high as 170,000 µg/kg and sediments accumulated on top of facility catch basins at concentrations as high as 220,000 µg/kg. All three soil and sediment samples collected in the area of Building 34 (referred to as the Baghouse Building) significantly exceeded the TSCA cleanup standard of 25,000 µg/kg for unrestricted use at low occupancy areas and the Removal Management Level (RML) of 94,000 µg/kg for total PCBs in industrial soil. In stormwater settling ponds where facility stormwater sediments were transported (Figure 4), Aroclor 1268 concentrations in sediment ranged upwards of 12,000 µg/kg. Total PCB concentrations exceeded the Washington sediment screening level of 2,500 µg/kg in all three samples. Aroclor 1268 was also detected in the surface water of the settling ponds at concentrations ranging from 10,803 to 23,821 pg/L, while total PCB concentrations ranged from 23,489 to 44,447 pg/L. These concentrations exceeded the Washington (7 pg/L) human health screening levels for the Spokane River by 3,000 times or more in each case. Finally, where stormwater discharged to Deadman Creek, Aroclor 1268 was again detected in stormwater effluent (793 pg/L) and total PCB concentrations for this sample were 1,875 pg/L, which exceeded the Washington (7 pg/L) human health screening levels for the Spokane River. PCBs were detected in sediment at the outfall at trace concentrations and were below Washington sediment cleanup goals.

The RSE results documented a pathway for migration of PCBs from the facility buildings with Robertson Siding through the catch basins and stormwater system to the settling ponds and then to Deadman Creek. Additionally, total PCB concentrations in several of these samples, including Robertson Siding, soil/solids on the ground, and catch basin sediment, exceeded the RML for industrial soil. In addition to the PCBs, samples from the sediment in catch basins and settling ponds also contained elevated concentrations of other compounds, including PAHs, metals, and petroleum hydrocarbons (diesel- and heavy oil-range organics), indicating that these contaminants are also migrating off site in a manner similar to PCBs. The presence of petroleum hydrocarbons collocated with PCBs increases the solubility and thus mobility of PCBs, which are otherwise hydrophobic. The presence of these hydrocarbons with PCBs could be contributing to the mobility observed in PCBs moving from the Site to Deadman Creek.

In the rafters of the Baghouse Building and exterior piping throughout the facility, Thermal System Insulation (TSI) material was observed to be visibly deteriorating from the pipelines and had fallen onto the ground. The results of the asbestos sampling indicated some of the TSI on the pipelines contained both amosite and chrysotile asbestos at total concentrations of approximately 20% and thus were ACM. Within the Baghouse Building there were approximately 5,500 linear feet of TSI in the rafters. On observed exterior pipelines throughout the facility, EPA estimated approximately 750 linear feet of suspect ACM TSI, however it is believed that upwards of 15,000 linear feet may be present throughout the facility in addition to what was documented in the Baghouse Building.

EPA observed numerous piles of waste materials and former products. Many of these materials were uncontrolled and without secondary containment. They were either outside and exposed directly to the elements, or inside unsecured and open buildings. Within Building 52, commonly called the Green Mill Building, there were approximately 4,500 cubic yards of a material labeled "Green Coke" in numerous piles and containers. Samples collected from the Green Coke contained elevated concentrations of PAHs in comparison to the RML for industrial soil. For instance, the carcinogen benzo(a)pyrene was detected at 560,000 µg/kg, which is over two times higher than the RML of 210,000 µg/kg for this contaminant. Metals

were also detected but were below action levels. In and near the Baghouse Building were several large piles of baghouse dust. One large pile (approximately 1,000 cubic yards) was located inside a large open and unsecured building (Building 35), and another large pile (approximately 220 cubic yards) was located outside and to the north of the Baghouse Building. There was visual evidence that material from this pile was being moved by wind and/or rain. Samples from the baghouse dust contained concentrations of PCBs that ranged from 1,080 µg/kg to 2,690 µg/kg (including Aroclor 1268), PAHs, and metals. There were three above ground storage tanks (ASTs) containing coal tar pitch in a small tank farm area. Several yards of coal tar were spilling out of one open AST. The coal tar sample contained multiple carcinogenic PAH compounds whose concentrations exceeded RMLs, most notably benzo(a)pyrene, which was detected at 3,400,000 µg/kg compared to the RML of 210,000 µg/kg. The quantity of coal tar remaining inside the tanks is unknown, however the maximum capacity of each tank is 1,485 cubic yards or 100,000 gallons.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

EPA has approved two Action Memoranda for this Site to address threats to human health and the environmental identified in the Removal Site Evaluation. The first Action Memorandum, approved on June 1, 2020, authorizes EPA to carry out a Time-Critical Removal Action at the former plant owned by Spokane Recycling LLC. The second Action Memorandum, approved on July 2, 2020, authorizes EPA to carry out a separate Time-Critical Removal Action on the 405-acre parcel owned by Kaiser Aluminum Investments Company (KAIC) where the stormwater aqueducts and settling ponds are located.

EPA's planned actions on the facility parcel outlined in the Action Memorandum include the removal of three primary source issues:
(1) An estimated 488,000 square feet of deteriorated Robertson Siding on approximately 24 buildings that is contaminated with PCBs and chysotile asbestos. As part of this effort, EPA will also remove detritus from ground surfaces adjacent to siding found to contain elevated concentrations of PCBs.
(2) An estimated 12,000 linear feet of deteriorated TSI pipe insulation running inside and outside of buildings that has become friable. This amount constitutes over half of the estimated 20,666 linear feet estimated to be on the property.
(3) An estimated 4,500 cubic yards material containing elevated concentrations of the carcinogenic PAH benzo(a)pyrene. This includes waste piles of Green Coke and Coal Tar Pitch.

2.1.2 Response Actions to Date

Mobilization & Site Preparation:
EPA mobilized an On-Scene Coordinator (OSC) along with Superfund Technical Assessment & Response Team (START) and Emergency & Rapid Response Services (ERRS) contractors to the Site on Monday July 27, 2020 to begin removal operations on the facility parcel that are estimated to require four to six months to complete. EPA and its contractors began setting up temporary job trailers, staging heavy equipment and supplies, and preparing the site to test the operational approach to removing panels of Robertson Siding.

Health & Safety
During the first few days on site, significant time was spent by the team reviewing and refining the site specific Health And Safety Plan (HASP). Before field operations began, the crew did a site walk of the entire 170-acre facility getting familiar with the myriad chemical and physical hazards present throughout the property. Air sampling and perimeter monitoring procedures were reviewed to ensure asbestos abatement and other cleanup activities would be compliance with Occupational Safety and Health Act (OSHA), the National Emission Standards for Hazardous Air Pollutants (NESHAP), and the Washington Administrative Code as it pertains to air pollution sources such as fugitive dust. Finally, significant time was spent reviewing and discussing the various Federal, State, and employer requirements incorporated into the HASP that specifically address health risks resulting from the current Coronavirus global pandemic.

Removal Activities
On Friday July 31, 2020, the team conducted its first demonstration of its mechanical approach to removing Robertson Siding panels on the southern side of Building 34. The general approach involved clearing detritus 20 feet away from buildings, laying down plastic to capture contaminants that may fall from siding during removal, applying water using water trucks and a "monsoon mister" attached to a skid steer to suppress dust emissions, and removing siding panels using an excavator equipped with hydraulic shears. Panels, once removed, were placed directly in 40-yard waste bins, double-lined with plastic and along with a inner liner of geotextile fabric, to prevent punctures. Once waste bins were full, each liner was separately sealed creating multi-layered "burrito wrap" and ready for transport off-Site to the licensed disposal facility.

Operations continued on Building 34 (Metal Products Building) through Friday and Saturday August 1, 2020 removing a total of 236 panels of Robertson Siding over the two day period.

EPA START contractors are using stationary Dusttrak DRX 8533 Aerosol Monitor to conduct full-time perimeter monitoring to monitor for dust that could leave the work area. START is also conducting air sampling inside and at the perimeter of work zones to confirm that wetting practices are preventing the releases of asbestos fibers during cleanup.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
PCBs & ACM	Siding panels	236	TBD		TBD

2.2 Planning Section

2.2.1 Anticipated Activities

During the next week, the crew will continue to establish the command post area and continue refining the siding removal process on Building 34 to maximize safety and efficiency.

Establishing VIPER connections on monitoring equipment to provide remote viewing of real-time air monitoring readings of particulate matter.

Continue development of GIS viewer and data dashboard to provide an up-to-date view of project progress for internal and external audiences.

2.2.1.1 Planned Response Activities
Siding Removal, Building 34

2.2.1.2 Next Steps
Continued refinement of removal approach. Generate updated understanding of production rate and associated costs to refined project cost projections.

2.2.2 Issues
Safety issues related to heat stress, physical and chemical hazards, and COVID-19 are a continued focus for the team. EPA has assigned a second OSC specifically to assume duties of Site Safety Officer to monitor compliance with the site specific Health & Safety Plan and support the workers address unanticipated challenges, as needed.

2.3 Logistics Section

Identifying lodging that provide in room kitchens has provided additional safety for out-of-town workers to comply with the Washington Governor's "Stay Home. Stay Safe" recommendations.

Identifying available water sources on this large site to assist with dust suppression and wetting efforts has created the need to evaluate whether an additional water truck may be necessary to support operations.

Due the intentional positioning of the Command Post as far as possible from work areas, command staff have noted that getting to and form the work area on foot presents inefficiencies and safety issues. Two additional Utility Terrain Vehicles (UTVs) have been ordered to address this.

2.4 Finance Section

2.4.1 Narrative
As the the removal approach continues to be refined over the next two weeks, the team will begin to refine cost projections based on the rate of production.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$5,179,428.57	$60,180.65	$5,119,247.92	98.84%
START	$648,514.35	$51,455.00	$597,059.35	92.07%
Intramural Costs				
Total Site Costs	$5,827,942.92	$111,635.65	$5,716,307.27	98.08%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer
Valeria Cramer - START

2.5.2 Liaison Officer

2.5.3 Information Officer
Bill Dunbar - EPA Region 10

3. Participating Entities

3.1 Unified Command
N/A

3.2 Cooperating Agencies
Washington Department of Ecology
Spokane Regional Clean Air Agency
Spokane County Health District

4. Personnel On Site

EPA - 1
START - 2
ERRS - 7

5. Definition of Terms

No information available at this time.

6. Additional sources of information

6.1 Internet location of additional information/report
https://www.kxly.com/epa-to-begin-removing-asbestos-pcbs-at-former-kaiser-aluminum-smelter-site/

https://www.spokesman.com/stories/2020/jul/28/epa-says-it-will-start-asbestos-pcb-cleanup-of-for/

https://m.facebook.com/eparegion10/

6.2 Reporting Schedule
Initial reporting schedule will be done weekly for the first 3-4 weeks. Reporting is expected to transition to a schedule of every 14 days beginning in late-August or early-September

7. Situational Reference Materials

No information available at this time.